

PLASMA ARC TORCH VENTED SHIELD SYSTEM

ABSTRACT OF THE DISCLOSURE

Vented shield systems for plasma arc torches are provided that comprise a shield cup body defining a distal end portion and at least one gas passage formed along the distal end portion. Additionally, a shield cap is disposed proximate the distal end portion with a flow control member disposed within the shield cap. Accordingly, a portion of a secondary gas is vented proximally through the gas passage and another portion of the secondary gas is vented distally through the flow control member. In another form, a shield cap is provided that comprises an annular ridge that blocks the secondary gas from flowing through the gas passage formed in the shield cup body. Further, methods of venting a secondary gas from a plasma arc torch are provided wherein a portion of the secondary gas is vented proximally and another portion of the secondary gas is vented distally.